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FOUR TRENDS SHAPING THE FUTURE OF THE MEDICAL BATTERY MARKET

The technologies in the medical battery market have undergone significant changes in recent years, ranging from zinc/mercury batteries to lithium-ion based batteries. The rising wave of new material technologies such as lithium-ion and zinc-air batteries is creating significant potential for advanced batteries in various medical applications because they offer the highest specific energy and energy density. The major growth drivers for this market are the increasing demand for

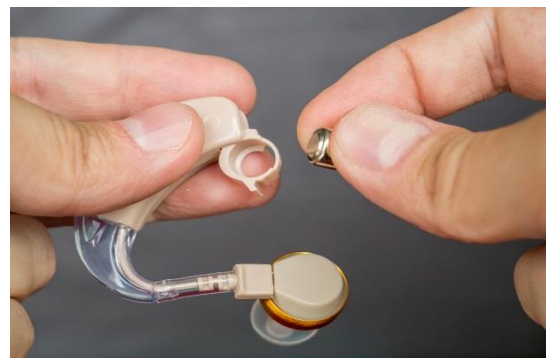
battery-powered portable and implantable devices in medical diagnostic and therapeutic practices.

The medical battery market is divided into several segments, such as lithium-ion, lead acid, zinc-air, and others. Key players in the medical battery market include GE Healthcare, Siemens, Kohlberg Kravish Roberts, Boston Scientific, Integer Holding, Eagle-Picher Technologies, and Saft Groupe. These have been working on different strategies to drive sales using highly influential marketing approaches; however, as we examine the challenges and opportunities ahead in this market, companies can benefit from a strategy of developing lithium-ion batteries and solid-state batteries, along with the key target market trends we have identified. Lucintel predicts the global medical battery market will be valued at \$2.2 billion by 2025, with an expected CAGR of approx. 4.1% between 2020 and 2025.

Lucintel identifies four trends set to influence the global medical battery market. Most of the industry players and experts agree that these four trends will accelerate developments in the medical battery industry in the near future. In terms of the widespread knowledge about the medical battery market already on the horizon, there is still a lack of unified perspective on the direction the industry is moving to proactively address developments. To help bring more clarity to this gap, our study aims to provide insights concerning the direction that changes are taking and how these changes will impact the medical battery market.

1. Growing Demand for Lithium-Ion Batteries

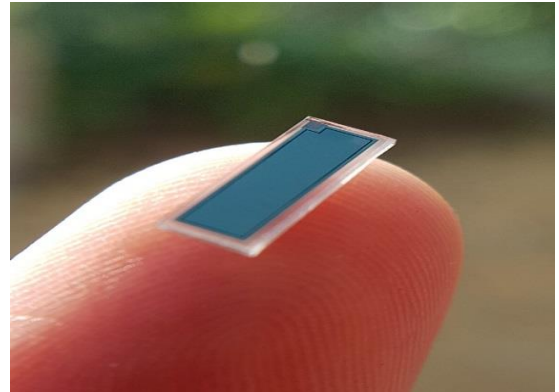
Lithium-ion batteries are used to power a number of medical devices and medical electrical equipment. Some examples of medical devices that have benefited from implementing lithium batteries into their design are hearing aids, pacemakers, surgical tools, medical defibrillators, robots, infusion pumps, and monitors.



Lithium batteries are small and lightweight, and due to a high energy density, they have a long-life feature. This makes them ideal for medical devices and medical electrical equipment.

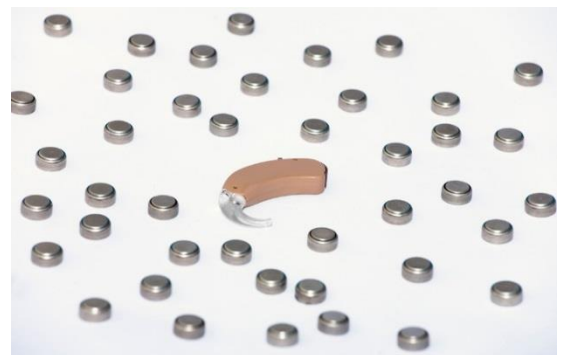
2. Solid-State Batteries for Medical Implants

The implantable medical device industry has a growing need for miniaturized, long-life power sources to enable wireless data transfer from increasingly sophisticated devices that are improving patients' lives. The battery maker Ilika has developed millimeter-scale solid-state batteries for medical implants, including for smart contact lenses. These batteries supply a self-sustaining power source that does not need to be changed regularly or use inconvenient cabling. Solid-state batteries have longer life spans of up to 10 years (up to 5x longer) and lower leakage currents (10x smaller), making them suitable for low-power wireless charging. They can also be integrated with other electronic components, enabling the end medical device to be kept as small as possible.



3. Use of Zinc-Air Batteries

Zinc-air batteries are small in size, but large in capacity. They offer quick startup, stable voltage, are lightweight, and have a very low self-discharge. Batteries using zinc-air technology become energized only when atmospheric oxygen is taken in to their electrolytes through the gas-permeable moisture resistant membranes that are part of these batteries' construction. The most recently introduced coin-sized zinc-air batteries are designed for portable electronic devices and personal medical equipment such as cardiac monitors and transmitters. These



batteries have high energy densities and are relatively inexpensive to produce. Sizes range from very small button cells for hearing aids to large-sized batteries in complex medical devices such as ECG machines.

4. Thin Film Batteries Capable of Powering Wearable Medical Devices

Thin film batteries have become enormously popular due to their light weight and small size. Increasing demand for thin film batteries to power compact devices, coupled with their improved safety, is a major factor driving the growth of batteries in wearables and medical applications. Wearable electronic devices increasingly require battery attributes such as thinness, flexibility, light weight, and low charging thresholds. The demand for batteries with these attributes is expected to increase significantly over the next few years, as manufacturers begin using them not only to differentiate from current products, but also to introduce new product categories.



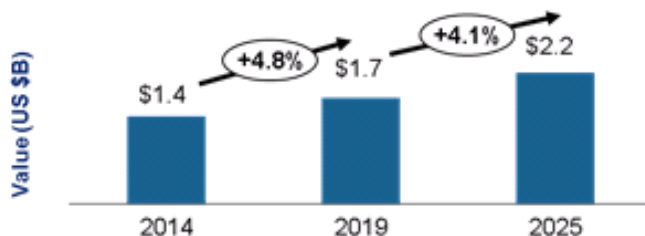
Strategic Considerations for Key Players in the Medical Battery Market

The medical battery industry is dynamic and ever-changing. Successful industry players are necessarily masters of innovation, change, and adaptation. To retain this status, they need to be attentive to current trends. We believe there will be promising opportunities for medical batteries in patient monitoring and general medical devices, and the cardiovascular, orthopedic, and home healthcare sectors. As per Lucintel's latest market research report (Source: <https://www.lucintel.com/medical-battery-market.aspx>), the [medical battery market](#) is expected to



grow with a CAGR of approx. 4.1% between 2020 and 2025, and reach \$2.2 billion by 2025. This market is primarily driven by the increasing demand for battery-powered portable and implantable devices in medical diagnostic and therapeutic practices.

**Trends and Forecast for the Global Medical Battery Market
(US \$B) (2014-2025)**



Source: Lucintel

Whether you are new to the medical battery market or an experienced player, it is important to understand the trends that impact the development process, as these trends as listed above will lead players to create long-term strategy formulation that will allow them to remain competitive and successful in the long run. For example, to capture growth, some of the strategic considerations for players in the medical battery market are as follows:

- Medical battery market players can increase their capabilities to develop lithium-ion batteries to power medical devices and medical electrical equipment.
- Players can focus on solid-state batteries, which are expected to lead future trends.
- Investment to increase competencies in the development of zinc-air batteries with high energy densities
- Research and development activities for the development of low-cost medical batteries

Note: In order to gain better understanding, and learn more about the scope, benefits, and companies researched, as well as other details in the medical battery market report from Lucintel, click on <https://www.lucintel.com/medical-battery-market.aspx>. This comprehensive report provides you in-depth analysis on market trends and forecast, segment analysis, regional analysis, competitive benchmarking, and company profiling of key players. In addition, we also





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